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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2  
148198 LANCE, MISSILE NUMBER 4571, ROUND NUMBER 357-APR, 1 OCTO--ETC(1)  
OCT 80

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 148198 LANCE, Missile Number 4571, Round Number 357-APT presented in tabular form.		

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## INTRODUCTION

14819B LANCE, Missile Number 4571, Round Number 357 APT  
was launched from LC-39, White Sands Missile Range (WSMR), New  
Mexico, at 1417 MDT on 01 October 1980. The scheduled launch time  
was 1415 MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind direction and speed, and cloud cover were made at the LC-39 met site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

### SITE AND ALTITUDE

LC-39 3000 Meters

(b) Air structure data (rawinsonde) were collected at the following met sites. Data were collected from surface to as high as possible in 500-foot increments.

### SITE AND TIME

WSD 1515 MDT  
HMN 1245 MDT  
SW-70 1405 MDT

TABLE 1. Surface Observations taken at 1415 MDT,  
1 October 1980, at LC-39, 14819B LANCE,  
Missile Number 4571, Round Number 357-APT.

ELEVATION	4063.75	FT/MSL
PRESSURE	879.1	MBS
TEMPERATURE	30.5	°C
RELATIVE HUMIDITY	24	%
DEW POINT	7.6	°C
DENSITY	1002	GM/M <sup>3</sup>
WIND SPEED	02	KTS
WIND DIRECTION	245	DEGREES
CLOUD COVER	CLEAR	

## PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM LC-39 DATE 01 October 1980 TIME 1405 MDT

COORDINATES (WSTM) X= 530,938.82 Y= 186,574.96 H= 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XX OR FEET AGL           .

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
sfc	245	02
60	290	03
120	290	05
180	305	05
240	295	05
300	290	03
360	300	03
420	310	07
480	320	07
540	310	05
600	315	07
660	325	06
720	335	07
780	330	06
840	335	05
900	325	05
960	340	08
1020	340	10
1080	340	11
1140	330	12
1200	345	15
1260	350	17
1320	360	19
1380	355	18
1440	350	17
1500	350	18
1560	355	20
1620	355	20
1680	005	19
1740	360	15

[illegible][illegible]

## PILOT BALLOON MEASURED WIND DATA

TABLE 3

RELEASED FROM LC-39 DATE 1 October 1980 TIME 1415 MDT

COORDINATES (WSTM)      X= 530,938.82      Y= .186,564.96      H= 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL X OR FEET AGL       .

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
sfc	135	02
60	138	01
120	325	07
180	340	05
240	280	05
300	315	06
360	320	11
420	320	09
480	320	06
540	315	06
600	330	07
660	335	08
720	340	08
780	325	11
840	320	12
900	345	13
960	340	14
1020	345	13
1080	350	14
1140	350	15
1200	350	17
1260	350	17
1320	350	17
1380	350	17
1440	355	18
1500	355	20
1560	002	19
1620	360	15
1680	009	17
1740	360	16

[illegible][illegible]



SIGNIFICANT LEVEL DATA  
 2750020527  
 WHITE SANDS

GEODOLITE COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

TABLE 4

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE FT	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE		REL. HUM. PERCENT
		AIR	DEWPOINT	
879.1	3039.0	30.5	7.7	24.0
850.0	4008.0	25.5	3.5	24.0
730.2	6730.4	20.6	3.6	33.0
709.8	7063.8	20.3	3.1	32.0
753.0	6911.4	18.0	-7.4	17.0
716.6	9796.3	15.7	-10.8	15.0
700.0	10946.0	14.1	-13.0	14.0
672.2	11565.9	12.7	-13.0	13.0
555.2	16725.1	1.0	-24.3	13.0
500.0	19456.2	-6.2	-29.3	14.0
470.2	21026.6	-9.4	-31.9	14.0
400.0	25063.8	-18.8	-33.5	14.0
373.6	26403.5	-22.0	-42.2	14.0
346.2	28549.1	-26.8	-45.5	15.0
340.6	29006.3	-26.8	-45.5	15.0
300.0	31011.2	-33.6	-50.1	17.0
250.0	36627.5	-44.6		
234.6	37421.6	-47.2		
224.0	38426.3	-48.7		
200.0	40852.0	-53.9		
189.0	42044.7	-55.9		
175.0	43645.5	-57.5		
150.0	46783.3	-65.2		
131.2	49044.0	-67.7		
120.8	50111.7	-71.4		
111.0	52624.5	-73.2		
103.0	54023.1	-73.8		
100.0	54707.5	-73.2		
85.2	57330.4	-69.7		
70.0	61700.0	-68.9		
50.6	66091.0	-60.4		
41.0	72300.0	-57.3		

STATION ALTITUDE 3000.00 FEET MSL  
 1 OCT. 1967 1515 HRS MDT  
 ASCENSION NO. 527

SIGNIFICANT LEVEL DATA  
 2750020527  
 WHITE SANDS

GEOMETRIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

TABLE 4 (CONT)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS INCH FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
46.0 73124.9	-50.0		
32.2 77710.7	-51.7		
30.0 79228.9	-51.7		
26.0 82308.4	-50.4		
21.7 86237.9	-47.4		
20.0 88617.9	-48.8		
14.9 94860.5	-46.2		
13.4 96826.9	-40.4		
10.2 103030.3	-36.9		

GEODETIC COORDINATES  
32.40003 LAT 146  
106.37033 LONG 146

UPPER AIR DATA  
275002027  
WHITE SAMPLE

TABLE 5

STATION ALTITUDE 3980.00 FEET  
106.37033 LONG 146  
1515 HRS MDT

GEODETIC ALTITUDE FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	RELAT. HUMIDITY PERCENT	DENSITY GM/CM <sup>3</sup> MLTER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TD)	WIND SPEED KNOTS	INDEX OF REFRACTION
3600.0	879.7	30.5	74.0	1.004.0	660.4	350.0	1.9	1.000267
4000.0	876.8	30.4	74.0	1.003.8	660.3	350.1	2.0	1.000267
4400.0	863.8	27.0	74.0	995.6	677.3	352.9	2.7	1.000260
5000.0	849.0	25.4	74.0	987.2	674.3	354.5	3.4	1.000253
5600.0	834.3	24.0	74.0	974.5	672.8	355.5	4.2	1.000251
6000.0	819.9	22.6	74.0	962.1	671.3	356.2	4.9	1.000249
6500.0	805.7	21.2	74.0	949.8	669.7	352.0	5.2	1.000247
7000.0	791.6	20.4	74.0	936.1	668.7	347.7	5.6	1.000242
7500.0	777.7	19.6	74.0	922.8	667.5	344.2	6.4	1.000233
8000.0	764.1	18.7	74.0	909.9	666.3	341.2	7.2	1.000223
8500.0	750.6	17.9	74.0	897.0	665.2	338.6	7.9	1.000215
9000.0	737.3	17.0	74.0	883.8	664.2	335.7	8.6	1.000211
9500.0	724.2	16.2	74.0	870.7	663.2	333.0	9.3	1.000207
10000.0	711.6	15.2	74.0	858.3	662.0	332.9	10.0	1.000203
10500.0	698.7	14.0	74.0	846.5	660.6	333.4	12.8	1.000199
11000.0	686.1	13.4	74.0	833.2	659.9	333.4	13.0	1.000195
11500.0	673.8	12.8	74.0	820.0	659.1	333.2	14.7	1.000192
12000.0	661.5	11.7	74.0	808.1	657.9	331.3	14.4	1.000188
12500.0	649.3	10.6	74.0	796.5	656.5	328.1	13.5	1.000185
13000.0	637.4	9.4	74.0	785.0	655.2	325.1	13.1	1.000182
13500.0	625.7	8.3	74.0	773.6	653.9	322.7	13.1	1.000179
14000.0	614.2	7.2	74.0	762.7	652.5	320.6	12.6	1.000176
14500.0	602.9	6.0	74.0	751.7	651.2	318.3	11.0	1.000173
15000.0	591.9	4.4	74.0	741.0	649.9	314.3	10.3	1.000171
15500.0	581.0	3.8	74.0	730.4	648.5	308.9	8.7	1.000168
16000.0	570.3	2.0	74.0	719.9	647.2	301.4	7.1	1.000165
16500.0	559.9	1.5	74.0	709.7	645.8	292.0	5.0	1.000163
17000.0	549.0	.5	74.0	699.6	644.4	282.0	4.0	1.000160
17500.0	538.9	-1.0	74.0	689.6	642.8	269.2	3.4	1.000157
18000.0	528.7	-2.4	74.0	679.8	641.2	258.9	1.0	1.000155
18500.0	518.7	-3.7	74.0	670.2	639.7	169.2	.6	1.000153
19000.0	508.8	-5.0	74.0	660.7	638.1	75.6	1.0	1.000151

UPPER AIR DATA  
2750020527  
WHITE SANDS

STATION ALTITUDE 5949.00 FEET MSL  
1 OCT. 60  
1515 HRS MDT  
ACQUISITION NO. 527

GEOMETRIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

TABLE 5 (CONT)

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) SPEED KNOTS	INDEX OF REFRACTION
19500.0	499.1	-0.3	14.0	651.3	636.5	25.4	1.000148
20000.0	489.5	-7.3	14.0	641.2	635.3	317.8	1.000145
20500.0	480.9	-8.3	14.0	631.2	634.1	261.3	1.000143
21000.0	470.7	-9.3	14.0	621.4	632.9	255.2	1.000141
21500.0	461.4	-10.5	14.0	611.8	631.5	256.9	1.000138
22000.0	452.2	-11.7	14.0	602.3	630.1	250.9	1.000136
22500.0	443.3	-12.8	14.0	593.0	628.6	247.2	1.000134
23000.0	434.5	-14.0	14.0	583.9	627.2	241.5	1.000132
23500.0	425.9	-15.2	14.0	574.9	625.8	232.1	1.000130
24000.0	417.4	-16.3	14.0	566.1	624.4	227.0	1.000127
24500.0	409.1	-17.5	14.0	557.4	623.0	225.0	1.000125
25000.0	401.0	-18.7	14.0	548.8	621.6	227.4	1.000123
25500.0	392.9	-19.8	14.0	540.3	620.1	231.4	1.000121
26000.0	384.9	-21.0	14.0	531.8	618.6	232.2	1.000119
26500.0	377.1	-22.2	14.0	523.4	617.2	232.5	1.000117
27000.0	369.3	-23.3	14.3	514.9	615.8	241.8	1.000115
27500.0	361.7	-24.5	14.5	506.6	614.4	254.8	1.000114
28000.0	354.2	-25.6	14.7	498.4	613.0	270.2	1.000112
28500.0	346.9	-26.7	15.0	490.3	611.6	282.2	1.000110
29000.0	339.7	-28.0	15.0	480.3	611.5	289.6	1.000108
29500.0	332.5	-29.0	15.3	472.4	610.1	294.2	1.000106
30000.0	325.5	-29.1	15.7	464.6	608.6	296.7	1.000104
30500.0	318.6	-30.3	16.0	457.0	607.1	297.3	1.000102
31000.0	311.9	-31.5	16.4	449.5	605.7	296.6	1.000101
31500.0	305.3	-32.6	16.7	442.2	604.2	298.8	1.000099
32000.0	298.6	-33.8	16.6**	435.0	602.7	301.0	1.000097
32500.0	292.3	-35.2	14.6**	427.8	601.0	305.0	1.000096
33000.0	285.9	-36.5	12.5**	420.8	599.3	307.9	1.000094
33500.0	279.6	-37.8	10.4**	414.0	597.6	311.0	1.000092
34000.0	273.5	-39.2	8.4**	407.2	595.9	313.7	1.000091
34500.0	267.5	-40.5	6.3**	400.6	594.2	315.7	1.000089
35000.0	261.6	-41.9	4.2**	394.1	592.5	315.6	1.000088

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA  
 2750020527  
 WHITE SANDS  
 TABLE 5

STATION ALTITUDE 5989.00 FEET MSL  
 1 OCT. 60  
 ASCENSION NO. 527

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

GEOMETRIC ALTITUDE FSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TR)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
5000.0	879.1	30.5	24.0	1004.0	680.4	350.0	1.9	1.000267
4000.0	876.8	30.4	24.0	1003.8	680.3	350.1	2.0	1.000267
4000.0	863.8	27.0	24.0	995.6	677.3	352.9	2.7	1.000260
3000.0	869.0	25.4	24.2	997.2	674.3	354.5	3.4	1.000253
2500.0	854.5	24.0	26.7	974.5	672.8	355.5	4.2	1.000251
2000.0	819.9	22.6	29.3	962.1	671.3	356.2	4.9	1.000249
1500.0	805.7	21.2	31.6	949.8	669.7	352.0	5.2	1.000247
1000.0	791.6	20.4	32.2	936.1	668.7	347.7	5.6	1.000242
750.0	777.7	19.6	27.2	922.8	667.5	344.2	6.4	1.000233
500.0	764.1	18.7	21.6	909.9	666.3	341.2	7.2	1.000223
250.0	750.6	17.9	16.9	897.0	665.2	338.6	7.9	1.000215
000.0	737.3	17.0	16.2	883.8	664.2	335.7	8.6	1.000211
9500.0	724.2	16.2	15.4	870.7	663.2	333.0	9.3	1.000207
10000.0	711.6	15.2	14.7	858.3	662.0	332.9	10.0	1.000203
10000.0	696.7	14.0	14.0	846.5	660.9	333.4	12.8	1.000199
11000.0	686.1	13.9	13.5	833.2	659.9	333.4	13.9	1.000195
11500.0	675.8	12.8	13.1	820.0	659.1	333.2	14.7	1.000192
12000.0	661.5	11.7	13.0	808.1	657.9	331.3	14.4	1.000188
12500.0	649.5	10.6	13.0	796.5	656.5	328.1	13.5	1.000185
13000.0	637.4	9.4	13.0	785.0	655.2	325.1	13.1	1.000182
13500.0	625.7	9.3	13.0	773.8	653.9	322.7	13.1	1.000179
14000.0	614.2	7.2	13.0	762.7	652.5	320.6	12.6	1.000176
14500.0	602.9	6.0	13.0	751.7	651.2	318.3	11.9	1.000173
15000.0	591.9	4.9	13.0	741.0	649.9	314.3	10.3	1.000171
15500.0	581.0	3.8	13.0	730.4	648.5	308.9	8.7	1.000168
16000.0	570.5	2.6	13.0	719.9	647.2	301.4	7.1	1.000165
16500.0	559.9	1.5	13.0	709.7	645.8	292.0	5.9	1.000163
17000.0	549.0	.3	13.0	699.6	644.4	282.0	4.8	1.000160
17500.0	538.9	-1.0	13.3	689.6	642.8	269.2	3.4	1.000157
18000.0	529.7	-2.6	13.5	679.8	641.2	258.9	1.8	1.000155
18500.0	518.7	-3.7	13.7	670.2	639.7	169.2	.6	1.000153
19000.0	508.8	-5.0	13.8	660.7	638.1	75.6	1.8	1.000150

GEOMETRIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
2750020527  
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL  
1 OCT. 68  
1515 HRS MDT  
ASCENSION NO. 527

TABLE 5 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KILOMETERS PER SECOND	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
13500.0	499.1	-6.3	14.0	651.3	636.5	23.4	1.3	1.000148
20000.0	489.5	-7.3	14.0	641.2	635.3	317.0	2.7	1.000145
20500.0	480.0	-8.3	14.0	631.2	634.1	281.3	4.8	1.000143
21000.0	470.7	-9.3	14.0	621.4	632.9	265.2	7.9	1.000141
21500.0	461.4	-10.5	14.0	611.8	631.5	256.9	9.4	1.000138
22000.0	452.2	-11.7	14.0	602.3	630.1	250.9	10.9	1.000136
22500.0	443.5	-12.8	14.0	593.0	628.6	247.2	11.3	1.000134
23000.0	434.5	-14.0	14.0	583.9	627.2	241.5	12.0	1.000132
23500.0	425.9	-15.2	14.0	574.9	625.8	232.1	13.3	1.000130
24000.0	417.4	-16.3	14.0	566.1	624.4	227.0	15.3	1.000127
24500.0	409.1	-17.5	14.0	557.4	623.0	225.0	17.9	1.000125
25000.0	401.0	-18.7	14.0	548.8	621.6	227.4	18.8	1.000123
25500.0	392.9	-19.8	14.0	540.3	620.1	231.4	19.1	1.000121
26000.0	384.9	-21.0	14.0	531.8	618.6	232.2	18.1	1.000119
26500.0	377.1	-22.2	14.0	523.4	617.2	232.5	16.7	1.000117
27000.0	369.3	-23.3	14.3	514.9	615.8	241.8	14.3	1.000115
27500.0	361.7	-24.5	14.5	506.6	614.4	254.8	12.6	1.000114
28000.0	354.2	-25.6	14.7	498.4	613.0	270.2	12.9	1.000112
28500.0	346.9	-26.7	15.0	490.3	611.6	282.2	14.1	1.000110
29000.0	339.7	-28.0	15.0	480.3	611.5	289.0	16.0	1.000108
29500.0	332.5	-28.0	15.3	472.4	610.1	294.2	18.4	1.000106
30000.0	325.5	-29.1	15.7	464.6	608.6	296.7	21.0	1.000104
30500.0	318.6	-30.3	16.0	457.0	607.1	297.3	22.8	1.000102
31000.0	311.0	-31.5	16.4	449.5	605.7	296.6	24.0	1.000101
31500.0	303.5	-32.6	16.7	442.2	604.2	298.8	25.2	1.000099
32000.0	296.6	-33.8	16.6**	435.0	602.7	301.0	26.3	1.000097
32500.0	292.5	-35.2	16.0**	427.8	601.0	305.0	27.6	1.000096
33000.0	285.9	-36.5	12.5**	420.8	600.3	307.9	28.8	1.000094
33500.0	279.6	-37.8	10.4**	414.0	597.6	311.0	30.0	1.000092
34000.0	273.5	-39.2	8.4**	407.2	595.9	313.7	31.1	1.000091
34500.0	267.5	-40.5	6.3**	400.6	594.2	315.7	30.8	1.000089
35000.0	261.6	-41.9	4.2**	394.1	592.5	313.0	30.4	1.000088

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3900.00 FEET ASL  
 1 OCT. 50  
 1515 HRS MDT  
 ASSOCIATION NO. 527

UPPER AIR DATA  
 2750620527  
 WILDLIFE SAMPLES

TABLE 5 (CONT)

GEOMETRIC COORDINATES  
 32.40043 LAT 1EG  
 106.57033 LONG 1EG

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMID. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
35500.0	255.0	-43.2	2.2**	387.7	590.8	312.9	29.5	1.000086
36000.0	250.5	-44.5	.1**	381.4	589.1	312.3	29.0	1.000085
36500.0	244.7	-45.5		374.4	587.8	312.2	30.4	1.000083
37000.0	239.2	-46.4		367.4	586.6	311.6	31.9	1.000082
37500.0	233.8	-47.3		360.6	585.4	311.2	33.8	1.000080
38000.0	228.4	-48.1		353.6	584.5	311.4	35.4	1.000079
38500.0	223.2	-48.9		346.7	583.4	312.2	36.9	1.000077
39000.0	218.1	-49.8		340.3	582.1	312.7	38.3	1.000076
39500.0	213.0	-51.0		334.1	580.7	312.9	39.5	1.000074
40000.0	208.1	-52.1		328.0	579.3	312.8	40.3	1.000073
40500.0	203.3	-53.1		321.9	577.8	312.4	40.6	1.000072
41000.0	198.6	-54.1		315.9	576.5	312.4	40.8	1.000070
41500.0	193.9	-55.0		309.7	575.4	313.2	40.9	1.000069
42000.0	189.4	-55.8		303.6	574.3	314.1	41.4	1.000068
42500.0	184.9	-56.4		297.9	572.9	315.2	42.5	1.000066
43000.0	180.5	-57.0		292.4	571.4	316.2	43.6	1.000065
43500.0	176.2	-57.2		286.9	569.9	316.7	44.4	1.000064
44000.0	172.0	-58.1		281.5	568.6	317.2	45.3	1.000063
44500.0	167.8	-58.1		275.6	567.4	318.8	42.9	1.000061
45000.0	163.7	-58.8		270.1	566.2	320.5	40.6	1.000060
45500.0	159.4	-59.9		264.7	564.9	322.0	39.9	1.000059
46000.0	155.3	-60.3		259.4	563.7	323.5	39.5	1.000058
46500.0	152.1	-60.7		254.2	562.5	323.2	39.2	1.000057
47000.0	148.4	-60.9		249.0	561.3	321.6	38.0	1.000055
47500.0	144.7	-60.4		243.8	560.2	319.8	38.0	1.000054
48000.0	141.1	-60.3		238.7	559.0	317.7	36.5	1.000053
48500.0	137.6	-60.1		233.7	557.9	317.2	35.7	1.000052
49000.0	134.2	-60.9		228.9	556.7	319.2	35.8	1.000051
49500.0	130.8	-60.9		224.2	555.5	320.9	35.6	1.000050
50000.0	127.5	-71.1		219.4	553.7	321.0	33.3	1.000049
50500.0	124.3	-71.7		214.9	553.0	321.1	31.0	1.000048
51000.0	121.1	-72.8		209.8	552.5	320.1	29.5	1.000047

\*\* AT LEAST ONE ASSIGNED QFL TIME PROPORTION VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 5939.00 FT. 1 MSL  
1 OCT. 60  
ASCENSION NO. 527

UPPER AIR DATA  
2750020527  
WHITE SANDS

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LONG DEG

1515 HRS MDT

TABLE 5 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
51500.0	118.0	-72.4		204.8	552.0	313.6	26.0	1.000046
52000.0	115.0	-72.8		200.0	551.5	318.0	24.5	1.000045
52500.0	112.1	-73.1		195.2	551.0	318.5	24.0	1.000043
53000.0	109.3	-73.4		190.5	550.7	319.1	23.1	1.000042
53500.0	106.5	-73.6		185.8	550.4	320.4	20.0	1.000041
54000.0	103.7	-73.8		181.3	550.1	322.2	16.9	1.000040
54500.0	101.1	-73.4		176.3	550.6	322.9	16.3	1.000039
55000.0	98.5	-72.9		171.3	551.3	323.1	16.6	1.000038
55500.0	96.0	-72.3		166.5	552.1	323.1	16.8	1.000037
56000.0	93.6	-71.8		161.9	552.9	322.9	16.6	1.000036
56500.0	91.2	-71.2		157.3	553.6	322.7	16.5	1.000035
57000.0	88.9	-70.6		152.9	554.4	323.8	15.1	1.000034
57500.0	86.7	-70.1		148.7	555.2	325.6	13.3	1.000033
58000.0	84.5	-69.7		144.6	555.7	327.6	11.8	1.000032
58500.0	82.4	-69.6		140.9	555.9	327.0	12.1	1.000031
59000.0	80.3	-69.5		137.3	556.0	326.4	12.5	1.000031
59500.0	78.3	-69.4		133.8	556.2	325.0	12.3	1.000030
60000.0	76.3	-69.3		130.4	556.3	322.6	11.5	1.000029
60500.0	74.4	-69.1		127.1	556.4	319.9	10.8	1.000028
61000.0	72.5	-69.0		123.8	556.6	320.5	9.9	1.000028
61500.0	70.7	-68.9		120.7	556.7	321.8	8.9	1.000027
62000.0	69.0	-68.5		117.4	557.3	323.7	7.7	1.000026
62500.0	67.3	-67.9		114.2	558.1	327.7	6.0	1.000025
63000.0	65.6	-67.3		111.1	559.0	335.0	4.3	1.000025
63500.0	64.0	-66.7		108.0	559.8	337.9	3.9	1.000024
64000.0	62.5	-66.0		105.1	560.7	330.8	4.1	1.000023
64500.0	60.9	-65.4		102.2	561.5	333.7	4.3	1.000023
65000.0	59.4	-64.8		99.4	562.4	332.7	4.8	1.000022
65500.0	58.0	-64.1		96.7	563.2	330.5	5.4	1.000022
66000.0	56.6	-63.5		94.0	564.1	334.6	5.9	1.000021
66500.0	55.2	-62.9		91.4	564.9	340.1	6.5	1.000020
67000.0	53.8	-62.3		88.9	565.7	355.5	7.4	1.000020



STATION ALTITUDE 3900.0 FEET  
 1001.00  
 1515 HRS MDT  
 ASCESSION NO. 527

UPPER AIR DATA  
 2750020527  
 WHITE SANDS

STATION ALTITUDE 3900.0 FEET  
 1001.00  
 1515 HRS MDT  
 ASCESSION NO. 527

STATION ALTITUDE 3900.0 FEET  
 1001.00  
 1515 HRS MDT  
 ASCESSION NO. 527

STATION ALTITUDE 3900.0 FEET  
 1001.00  
 1515 HRS MDT  
 ASCESSION NO. 527

TABLE 5 (CONT)

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	HUMIDITY PERCENT	DENSITY GRAMS PER CUBIC METER	WIND SPEED KNOTS	WIND DIRECTION DEGREES (TN)	INDEX OF REFRACTION
67500.0	52.5	-61.0		80.5	566.6	0.4	1.000019
68000.0	51.7	-61.0		84.1	567.4	16.1	1.000019
68500.0	50.9	-60.4		81.8	568.2	22.4	1.000018
69000.0	49.8	-60.0		79.7	568.8	22.1	1.000018
69500.0	47.6	-59.6		77.7	569.3	21.9	1.000017
70000.0	46.5	-59.2		75.7	569.9	23.5	1.000017
70500.0	45.6	-58.8		73.7	570.4	27.3	1.000016
71000.0	44.5	-58.4		71.9	571.0	31.3	1.000016
71500.0	43.2	-58.0		70.0	571.5	33.0	1.000016
72000.0	42.2	-57.5		68.2	572.0	51.1	1.000015
72500.0	41.2	-57.5		66.6	572.1	08.0	1.000015
73000.0	40.2	-57.4		65.1	571.0	63.3	1.000014
73500.0	39.3	-57.5		63.5	572.1	95.3	1.000014
74000.0	38.4	-56.8		61.6	573.0	100.0	1.000014
74500.0	37.5	-56.1		60.2	573.9	114.0	1.000013
75000.0	36.6	-55.4		58.6	574.3	121.3	1.000013
75500.0	35.7	-54.7		57.0	575.8	127.0	1.000013
76000.0	34.9	-54.1		55.5	576.7	134.0	1.000012
76500.0	34.1	-53.4		54.0	577.6	147.1	1.000012
77000.0	33.3	-52.7		52.6	578.5	164.4	1.000012
77500.0	32.5	-52.0		51.2	579.4	180.1	1.000011
78000.0	31.3	-51.7		50.0	579.7	136.4	1.000011
78500.0	31.3	-51.7		48.8	579.7	216.4	1.000011
79000.0	30.5	-51.7		47.7	579.7	222.3	1.000011
79500.0	29.9	-51.6		46.6	579.9	214.0	1.000010
80000.0	28.9	-51.4		45.5	580.2	200.8	1.000010
80500.0	28.3	-51.2		44.4	580.4	136.3	1.000010
81000.0	27.6	-51.0		43.3	580.7	179.3	1.000010
81500.0	27.0	-50.7		42.3	581.0	174.1	1.000009
82000.0	26.4	-50.5		41.3	581.3	170.7	1.000009
82500.0	25.8	-50.3		40.3	581.9	169.6	1.000009
83000.0	25.2	-49.9		39.3	582.1	163.3	1.000009

UPPER AIR DATA  
2750020527  
WHITE SANDS

STATION ALTITUDE 3333.00 FEET MSL  
1 OCT. 43  
ASCESSION NO. 527

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LONG DEG

TABLE 5 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TH)	SPEED KNOTS	
33500.0	24.6	-43.5		38.3	582.6	167.2	3.9	1.000009
34000.0	24.1	-43.1		37.4	583.1	170.7	3.4	1.000008
34500.0	23.5	-43.7		36.5	583.6	175.0	2.9	1.000008
35000.0	23.0	-43.3		35.6	584.1	182.4	2.4	1.000008
35500.0	22.4	-43.0		34.7	584.6	191.8	1.6	1.000008
36000.0	21.9	-42.6		33.9	585.1	220.8	.8	1.000008
36500.0	21.4	-42.6		33.1	585.1	295.0	.8	1.000007
37000.0	21.0	-43.0		32.4	584.6	329.5	1.1	1.000007
37500.0	20.5	-43.4		31.7	584.1	354.7	1.3	1.000007
38000.0	20.0	-43.3		31.1	583.5	10.7	1.7	1.000007
38500.0	19.6	-43.6		30.4	583.8	20.9	2.3	1.000007
39000.0	19.1	-43.4		29.6	584.0	26.6	3.4	1.000007
39500.0	18.7	-43.2		28.9	584.3	29.6	4.5	1.000006
40000.0	18.3	-43.0		28.3	584.6	31.4	5.5	1.000006
40500.0	17.9	-42.8		27.6	584.8	32.3	5.5	1.000006
41000.0	17.5	-42.6		27.0	585.1	33.3	5.5	1.000006
41500.0	17.1	-42.4		26.3	585.3	34.3	5.5	1.000006
42000.0	16.7	-42.2		25.7	585.6	22.5	4.5	1.000006
42500.0	16.3	-42.0		25.1	585.9	1.6	3.0	1.000006
43000.0	15.9	-41.8		24.5	586.1	33.4	3.7	1.000005
43500.0	15.6	-41.6		23.9	586.4	319.1	4.0	1.000005
44000.0	15.2	-41.4		23.4	586.7	307.6	4.3	1.000005
44500.0	14.9	-41.1		22.8	587.0	297.9	4.7	1.000005
45000.0	14.5	-40.9		22.2	588.6	283.6	5.1	1.000005
45500.0	14.2	-40.7		21.6	590.2	253.6	5.8	1.000005
46000.0	13.9	-40.4		21.0	591.8	241.3	7.3	1.000005
46500.0	13.6	-40.2		20.4	593.3	230.7	9.2	1.000005
47000.0	13.3	-40.0		19.9	594.5	231.6	10.5	1.000004
47500.0	13.0	-39.8		19.4	594.8	232.4	11.8	1.000004
48000.0	12.7	-39.7		19.0	595.2	233.0	13.1	1.000004
48500.0	12.5	-39.5		18.6	595.5	233.4	14.4	1.000004
49000.0	12.2	-39.2		18.1	595.9			1.000004

STATION ALTITUDE 3900.00 FT I HSL  
 1001.00  
 ASCENSION NO. 527

UPPER AIR DATA  
 2750020527  
 WHITE SANDS

1515 HRS MDT

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

TABLE 5 (CONT)

GEOMETRIC ALTITUDE FSL FTL	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TW)	SPEED KNOTS	INDEX OF REFRACTION
39000.0	11.0	-50.0		17.7	590.3			1.000004
10000.0	11.7	-38.6		17.3	596.6			1.000004
100500.0	11.6	-38.3		16.9	597.0			1.000004
101000.0	11.2	-38.0		16.5	597.3			1.000004
101500.0	10.9	-37.8		16.2	597.7			1.000004
102000.0	10.7	-37.5		15.8	598.1			1.000004
102500.0	10.4	-37.2		15.4	598.4			1.000003
103000.0	10.2	-36.9		15.1	598.8			1.000003

STATION ALTITUDE 3939.00 FEET MSL  
 1 OCT. 69  
 ASCENDING NO. 527 1515 HRS MDT

MANDATORY LEVELS  
 275002052/  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37035 LONG DEG

TABLE 6

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT DEGREES	PERCENT		DIRECTION DEGREES(TN)	SPEED KNOTS
350.0	4964.	25.5	3.5	24.		354.4	3.4
300.0	6697.	20.7	3.8	33.		350.3	5.3
750.0	8516.	17.8	-7.7	17.		338.5	8.0
700.0	10437.	14.1	-13.0	14.		333.4	12.6
650.0	12474.	10.6	-16.0	13.		328.2	13.6
600.0	14600.	5.7	-20.5	13.		317.2	11.4
550.0	16951.	.4	-24.7	13.		202.8	4.9
500.0	19427.	-6.2	-29.3	14.		34.2	1.4
450.0	22103.	-12.0	-33.9	14.		250.0	10.9
400.0	25021.	-18.8	-39.5	14.		227.8	18.8
350.0	28237.	-26.2	-45.1	15.		278.2	13.4
300.0	31807.	-33.6	-50.1	17.		301.2	26.1
250.0	35908.	-40.6				312.3	29.0
200.0	40753.	-53.9				312.2	40.8
175.0	43533.	-59.5				316.8	44.6
150.0	46655.	-65.2				322.5	39.0
125.0	50244.	-71.6				321.1	31.6
100.0	54537.	-73.2				323.0	18.4
80.0	58074.	-69.4				326.5	12.5
70.0	61401.	-63.9				322.2	8.6
60.0	64506.	-65.0				334.1	4.5
50.0	68233.	-60.4				22.4	10.8
40.0	72335.	-58.0				85.4	8.6
30.0	78200.	-51.7				219.0	4.5
25.0	82705.	-49.7				168.0	4.0
20.0	87609.	-48.8				10.0	1.7
15.0	93042.	-46.3				302.3	4.5

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES  
32.88365 LAT DEG  
106.09965 LONG DEG

SIGHT LIGHT LEVEL DATA  
2750710302  
HOLLOWAY

TABLE 7

PRECIPITATION MILLIMETERS PER HOUR	GEOMETRIC ALTITUDE FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
377.8	4120.6	27.0	19.7
467.6	4064.6	25.0	8.1
350.0	5053.4	23.3	7.6
631.8	5572.3	22.0	6.2
821.0	6016.6	20.7	6.6
802.4	6693.3	19.9	-1.0
744.4	6805.0	17.6	-7.7
700.0	10517.0	19.0	-10.0
652.4	12450.7	11.1	-15.4
567.0	16742.7	2.7	-22.9
500.0	19534.4	-5.7	-27.4
449.6	22240.8	-12.0	-32.6
400.0	25143.7	-19.0	-37.8
359.8	27702.6	-25.3	-43.1
334.0	29072.5	-28.7	-48.0
300.0	31273.4	-34.1	-50.5
250.0	36000.1	-40.5	
200.0	40011.4	-53.8	
179.6	43279.3	-59.0	
150.0	46834.3	-65.2	
129.4	49312.1	-71.2	
100.0	50755.1	-74.1	
85.6	57773.1	-70.6	
70.0	61738.3	-68.0	
50.0	68527.5	-61.2	
30.0	73213.5	-52.8	

STATION ALTITUDE 4120.60 FEET AMSL  
1 OCT. 63  
ACCESSION NO. 302  
1515 HRS MOT

UPPER AIR DATA  
2750010362  
HOLLAMAN

STATION ALTITUDE 4126.59 FEET MSL  
1 OCT 67  
1515 HRS MDT  
ACQUISITION NO. 302

GEODETIC COORDINATES  
32.88865 LAT DEG  
106.09965 LONG DEG

TABLE 8

GEOPHYSIC ALTITUDE FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4126.0	877.8	27.0	19.7	36.0	1013.2	676.0	270.0	4.1	1.000280
4500.0	866.5	24.9	18.0	34.2	1003.1	674.2	282.1	3.8	1.000271
5000.0	851.6	23.5	7.3	36.7	995.5	672.5	300.4	3.6	1.000268
5500.0	836.8	22.4	0.1	39.9	981.7	671.3	318.2	3.9	1.000266
6000.0	822.3	20.0	6.7	40.0	970.2	669.4	333.6	4.6	1.000259
6500.0	807.9	20.1	1.0	27.9	956.7	668.2	346.5	6.2	1.000242
7000.0	793.7	19.6	-2.6	22.1	942.3	667.3	353.4	8.1	1.000232
7500.0	779.7	19.0	-4.0	20.7	927.6	666.6	358.0	10.7	1.000227
8000.0	766.0	18.5	-5.3	19.3	913.2	666.0	358.4	13.1	1.000222
8500.0	752.5	17.9	-6.8	17.9	898.9	665.3	358.7	14.9	1.000217
9000.0	739.2	17.2	-8.0	17.0	885.4	664.4	359.1	15.8	1.000212
9500.0	726.1	16.1	-8.9	17.0	872.9	663.2	359.7	14.3	1.000209
10000.0	713.1	15.1	-9.7	17.0	860.6	661.9	3.0	12.2	1.000205
10500.0	700.0	14.0	-10.6	17.0	848.4	660.7	12.8	9.4	1.000202
11000.0	687.8	13.3	-11.0	16.3	835.4	659.8	14.1	8.2	1.000198
11500.0	675.5	12.5	-13.0	15.5	822.6	658.9	5.9	8.1	1.000194
12000.0	663.3	11.8	-14.2	14.7	810.0	658.0	350.3	8.9	1.000190
12500.0	651.4	11.0	-15.4	14.0	797.7	657.1	336.9	10.7	1.000186
13000.0	639.4	9.9	-16.4	13.9	786.2	655.7	328.7	11.1	1.000183
13500.0	627.7	8.8	-17.4	13.7	774.8	654.4	321.4	11.3	1.000180
14000.0	616.1	7.7	-18.4	13.6	763.7	653.1	318.0	11.0	1.000177
14500.0	604.8	6.6	-19.4	13.5	752.6	651.8	315.0	10.7	1.000174
15000.0	593.7	5.5	-20.4	13.3	741.6	650.5	311.2	8.5	1.000171
15500.0	582.8	4.3	-21.4	13.2	731.1	649.2	304.2	6.0	1.000168
16000.0	572.1	3.2	-22.4	13.1	720.6	647.9	292.4	4.4	1.000166
16500.0	561.5	2.0	-23.2	13.2	710.3	646.5	271.8	3.2	1.000163
17000.0	550.8	.8	-23.9	13.7	700.1	645.0	307.3	2.3	1.000160
17500.0	540.4	-.5	-24.6	14.1	690.1	643.5	349.8	2.6	1.000158
18000.0	530.2	-1.8	-25.2	14.6	680.2	641.9	9.8	3.8	1.000156
18500.0	520.2	-3.1	-25.9	15.1	670.5	640.4	17.4	5.2	1.000153
19000.0	510.3	-4.3	-26.7	15.5	661.0	638.9	3.5	5.7	1.000151
19500.0	500.7	-5.6	-27.4	16.0	651.6	637.4	352.4	6.6	1.000149

STATION ALTITUDE 9120.59 FEET ASL  
1 OCT. 63 1515 HRS MDT  
ABSENCE OF W. 302

UNDEW AIR DATA  
2750010302  
HOLLOWAY

CELESTIC COORDINATES  
32.88865 LAT NEG  
106.09965 LONG NEG

TABLE 8 (CONT)

GEOMETRIC ALTITUDE ASL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> AT 15°C	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TD)	WIND SPEED KNOTS	INDEX OF REFRACTION
20000.0	430.7	-5.4	16.0	0.918	636.0	328.1	7.5	1.000146
20500.0	431.0	-7.9	16.0	0.921	634.6	310.3	9.1	1.000144
21000.0	422.0	-9.1	16.0	0.920	633.2	287.4	9.6	1.000141
21500.0	402.9	-10.3	15.0	0.913	631.8	270.0	11.0	1.000139
22000.0	453.9	-11.4	16.0	0.913	630.3	257.5	11.3	1.000137
22500.0	444.9	-12.6	16.1	0.910	628.9	247.1	11.9	1.000135
23000.0	433.1	-13.8	16.3	0.905	627.4	242.3	11.2	1.000132
23500.0	427.4	-15.0	16.4	0.906	626.0	236.8	10.6	1.000130
24000.0	410.9	-16.2	16.6	0.907	624.5	230.3	10.2	1.000128
24500.0	410.5	-17.4	16.8	0.909	623.0	223.4	10.0	1.000126
25000.0	402.3	-18.7	17.0	0.906	621.0	215.0	11.6	1.000124
25500.0	398.2	-19.9	17.0	0.902	620.1	203.6	13.4	1.000122
26000.0	390.1	-21.1	17.0	0.898	618.5	200.5	14.6	1.000120
26500.0	378.2	-22.3	17.0	0.895	617.0	205.0	15.8	1.000118
27000.0	370.5	-23.5	17.0	0.891	615.5	211.9	16.3	1.000116
27500.0	362.9	-24.8	17.0	0.889	614.0	219.9	16.9	1.000114
28000.0	355.0	-25.9	17.0	0.886	612.7	223.7	16.2	1.000112
28500.0	349.0	-26.8	17.0	0.884	611.5	241.1	15.7	1.000110
29000.0	340.7	-27.8	17.0	0.882	610.3	257.2	15.1	1.000108
29500.0	333.6	-28.9	17.0	0.879	609.1	270.7	15.5	1.000107
30000.0	326.5	-29.9	17.0	0.876	607.7	290.1	17.1	1.000105
30500.0	319.0	-30.9	17.0	0.873	606.4	290.7	19.0	1.000103
31000.0	312.3	-32.0	17.0	0.871	605.0	301.0	21.0	1.000101
31500.0	306.2	-33.1	17.0	0.868	603.7	303.4	23.0	1.000099
32000.0	299.7	-34.2	16.9**	0.865	602.3	304.9	25.0	1.000098
32500.0	293.1	-35.4	16.8**	0.862	600.7	306.2	27.0	1.000096
33000.0	286.7	-36.7	16.6**	0.859	599.1	307.5	28.9	1.000094
33500.0	280.4	-38.0	16.7**	0.855	597.5	307.8	29.2	1.000093
34000.0	274.2	-39.2	16.5**	0.854	595.9	308.3	29.2	1.000091
34500.0	268.2	-40.5	16.6**	0.851	594.2	308.6	30.2	1.000090
35000.0	262.4	-41.7	16.5**	0.848	592.0	308.9	31.5	1.000088
35500.0	256.6	-43.0	16.4**	0.844	591.0	309.2	32.7	1.000087

\*\* AT LEAST ONE OBSERVATION BELOW THE INDICATED VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 1126.59 FEET MSL  
 1 OCT. 63  
 1515 HRS MDT  
 ABSOLUTE HUM. 302

UPPER AIR DATA  
 2750010362  
 HOLLOWAY

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LONG DEG

TABLE 8 (CONT)

GEOMETRIC ALTITUDE FSL FEET	PRESSURE HILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> ALTEK	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
36000.0	251.0	-44.3	44.7	382.0	569.4	309.0	33.8	1.000085
36500.0	245.5	-45.3		375.0	588.1	310.1	34.0	1.000084
37000.0	239.7	-46.3		360.0	586.8	310.6	35.4	1.000082
37500.0	234.2	-47.2		361.1	585.6	311.2	36.0	1.000080
38000.0	229.8	-48.2		354.4	584.3	311.3	36.7	1.000079
38500.0	225.6	-49.2		347.7	583.1	311.0	37.5	1.000077
39000.0	218.5	-50.1		341.3	581.8	310.4	38.4	1.000076
39500.0	213.5	-51.1		334.9	580.6	309.3	39.5	1.000075
40000.0	208.6	-52.0		328.7	579.3	308.2	40.7	1.000073
40500.0	203.8	-53.0		322.6	578.0	308.0	41.0	1.000072
41000.0	199.2	-54.0		316.6	576.7	307.9	41.3	1.000071
41500.0	194.5	-55.1		310.7	575.3	309.0	41.4	1.000069
42000.0	189.9	-56.2		304.9	573.8	310.8	41.4	1.000068
42500.0	185.4	-57.3		299.2	572.4	312.6	41.4	1.000067
43000.0	181.0	-58.4		293.6	570.9	314.5	41.6	1.000065
43500.0	176.7	-59.4		287.9	569.6	316.6	42.0	1.000064
44000.0	172.4	-60.5		282.1	568.4	320.0	43.3	1.000063
44500.0	168.2	-61.2		276.4	567.2	323.1	44.8	1.000062
45000.0	164.1	-62.0		270.9	566.0	324.7	44.0	1.000060
45500.0	160.2	-62.9		265.4	564.9	326.0	42.7	1.000059
46000.0	156.3	-63.8		260.1	563.7	326.5	40.8	1.000058
46500.0	152.5	-64.7		254.8	562.5	325.2	38.0	1.000057
47000.0	148.8	-65.6		249.7	561.2	323.8	35.2	1.000056
47500.0	145.0	-66.6		244.6	559.9	323.8	36.3	1.000054
48000.0	141.6	-67.5		239.6	558.6	323.9	37.8	1.000053
48500.0	137.9	-68.5		234.7	557.3	324.2	38.5	1.000052
49000.0	134.5	-69.5		229.9	556.0	325.1	37.6	1.000051
49500.0	131.1	-70.4		225.3	554.7	326.1	36.6	1.000050
50000.0	127.8	-71.3		220.5	553.6	326.6	33.5	1.000049
50500.0	124.6	-71.6		215.2	553.1	327.7	29.3	1.000048
51000.0	121.0	-71.9		210.1	552.7	328.2	26.0	1.000047
51500.0	118.5	-72.2		205.0	552.3	327.5	24.8	1.000046

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.



GEODETIC COORDINATES  
32.88865 LAT 1E6  
106.09965 LONG 1E6

UPPER AIR DATA  
2750010500  
HOLLAND

TABLE 8 (CONT)

STATION ALTITUDE 4120.00 FT 1550  
1 OCT 63  
1515 HRS MDT  
ASCE 510140. 352

GEOMETRIC ALTITUDE FT	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT WIND DIRECTION WIND SPEED WIND GUSTS	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND M/SEC	DIRECTION DEGREES (TH)	SPEED KNOTS	INDEX OF REFRACTION
52000.0	115.5	-72.5		200.1	551.9	325.7	23.6	1.000045
52500.0	112.5	-72.7		175.3	551.5	327.1	23.3	1.000043
53000.0	109.5	-73.0		190.6	551.1	327.6	23.2	1.000042
53500.0	106.7	-73.5		186.0	550.7	328.0	21.1	1.000041
54000.0	104.0	-73.6		181.0	550.3	328.4	17.7	1.000040
54500.0	101.5	-73.9		177.2	549.8	328.1	14.5	1.000039
55000.0	99.7	-73.8		172.6	550.0	323.5	12.1	1.000038
55500.0	96.2	-73.2		167.7	550.8	316.3	9.8	1.000037
56000.0	93.8	-72.7		163.0	551.0	315.6	9.5	1.000036
56500.0	91.0	-72.1		158.4	552.4	316.6	9.5	1.000035
57000.0	89.1	-71.5		153.9	553.2	318.7	9.2	1.000034
57500.0	86.8	-70.9		149.5	554.0	322.5	8.7	1.000033
58000.0	84.6	-70.2		145.4	554.7	325.2	8.2	1.000032
58500.0	82.5	-70.1		141.6	555.1	325.1	7.6	1.000032
59000.0	80.4	-69.9		137.8	555.5	325.0	7.1	1.000031
59500.0	78.0	-69.5		134.1	556.0	330.5	7.1	1.000030
60000.0	76.5	-69.1		130.6	556.4	335.8	7.1	1.000029
60500.0	74.5	-68.8		127.1	556.9	341.9	7.9	1.000028
61000.0	72.7	-68.5		123.7	557.5	347.0	9.1	1.000028
61500.0	70.0	-68.2		120.4	557.8	351.8	9.8	1.000027
62000.0	67.1	-67.7		117.2	558.4	351.8	8.3	1.000026
62500.0	64.9	-67.2		114.0	559.0	13.2	7.1	1.000025
63000.0	62.8	-66.7		111.0	559.7	16.8	5.0	1.000025
63500.0	60.1	-66.2		108.0	560.4	17.1	2.6	1.000024
64000.0	57.5	-65.7		105.1	561.1	327.4	2.6	1.000023
64500.0	55.0	-65.2		102.3	561.7	272.2	2.6	1.000023
65000.0	52.5	-64.7		99.5	562.4	263.6	4.6	1.000022
65500.0	50.1	-64.2		96.9	563.1	257.5	5.2	1.000022
66000.0	47.7	-63.7		94.3	563.8	250.4	5.7	1.000021
66500.0	45.8	-63.2		91.7	564.4	253.4	5.0	1.000020
67000.0	43.0	-62.7		89.3	565.1	272.1	3.6	1.000020
67500.0	40.5	-62.2		86.9	565.8	307.1	3.0	1.000019

STATION ALTITUDE 4126.59 FEET MSL  
 1 OCT. 60  
 ASUT SAUT. I.O. 302

UPPER AIR DATA  
 2750610302  
 FOLLOMAN

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LONG DEG

1515 HRS NDT

TABLE 8 (CONT)

GEOM. ALTITUDE FSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (IN) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
6000.0	51.5	-61.7		84.6	565.5	342.0	4.2	1.000019
6050.0	50.1	-61.2		82.3	567.1	353.4	6.1	1.000018
6100.0	48.9	-60.8		80.2	567.7	4.7	7.4	1.000018
6150.0	47.7	-60.4		78.2	568.2	3.8	8.6	1.000017
7000.0	46.6	-60.0		76.2	568.7	15.2	9.5	1.000017
7050.0	45.5	-59.7		74.2	569.2	25.0	10.1	1.000017
7100.0	44.4	-59.3		72.4	569.8	33.5	10.9	1.000016
7150.0	43.4	-58.9		70.5	570.3	43.2	10.3	1.000016
7200.0	42.4	-58.5		68.7	570.8	54.1	9.9	1.000015
7250.0	41.4	-58.1		67.0	571.3	63.7	10.0	1.000015
7300.0	40.4	-57.7		65.3	571.9	69.2	10.4	1.000015
7350.0	39.4	-57.3		63.6	572.4	74.2	10.9	1.000014
7400.0	38.5	-56.9		62.0	572.9	73.1	10.7	1.000014
7450.0	37.6	-56.5		60.4	573.4	82.0	10.3	1.000013
7500.0	36.7	-56.1		58.9	573.9	87.5	10.0	1.000013
7550.0	35.8	-55.7		57.4	574.5	99.0	9.8	1.000013
7600.0	35.0	-55.3		56.0	575.0	10.4	10.1	1.000012
7650.0	34.2	-54.9		54.5	575.5	113.9	9.7	1.000012
7700.0	33.4	-54.5		53.2	576.0	127.2	8.9	1.000012
7750.0	32.6	-54.2		51.8	576.5			1.000012
7800.0	31.8	-53.8		50.5	577.0			1.000011
7850.0	31.0	-53.4		49.2	577.5			1.000011
7900.0	30.3	-53.0		48.0	578.1			1.000011

STATION ALTITUDE 9125.59 FEET ASL  
 TIME 1515 HRS MDT  
 STATION NO. 302

TEMPERATURE LEVELS  
 27000103002  
 10000000000

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LONG DEG

TABLE 9

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUMID.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	POTENTIAL DEGREE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS
899.0	5050.	23.3	7.8	37.	302.4	5.6
809.0	6775.	19.8	-2.0	25.	351.0	7.1
750.0	8507.	17.8	-7.1	18.	358.8	15.2
705.0	10568.	14.0	-10.6	17.	13.1	9.4
650.0	12504.	10.9	-15.5	14.	335.7	10.9
600.0	14713.	6.1	-19.9	13.	313.5	9.8
550.0	17027.	.7	-23.9	14.	311.2	2.2
500.0	19507.	-5.7	-27.4	16.	351.1	6.6
450.0	22185.	-11.9	-32.6	16.	292.7	11.6
400.0	25102.	-19.0	-37.8	17.	213.1	12.0
350.0	28313.	-26.6	-44.2	17.	237.6	15.8
300.0	31912.	-34.1	-50.5	17.	304.8	24.9
250.0	36069.	-44.5			309.7	33.9
200.0	40813.	-53.8			307.9	41.3
175.0	43580.	-59.7			317.9	42.4
150.0	46709.	-65.3			324.4	36.3
125.0	50201.	-71.5			327.5	30.0
100.0	54537.	-74.1			326.1	13.4
80.0	58907.	-69.7			325.5	7.0
70.0	61528.	-68.0			355.2	9.1
60.0	64591.	-64.9			266.7	3.8
50.0	68272.	-61.2			356.5	6.1
40.0	72056.	-57.5			70.3	10.5
30.0	78883.	-52.8				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4395.50 FEET MSL  
 1 OCT. 69  
 ASCENSION NO. 4 1405 HRS MDT

SIGNIFICANT LEVEL DATA

2/50230004  
 SW 70

GEODETIC COORDINATES  
 33.30888 LAT DEG  
 106.40406 LON DEG

TABLE 10

PRESSURE MILLIBARS	GEO METRIC ALTITUDE MFL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEW POINT CENTIGRADE	
869.7	4395.5	30.4	5.0	21.0
850.0	5031.3	28.5	4.1	21.0
798.6	4661.6	17.5	-2.7	25.0
700.0	10532.1	14.2	-10.5	17.0
662.8	12935.0	10.6	-12.0	19.0
644.6	12796.2	10.5	-15.8	14.0
549.0	17110.3	1.0	-23.4	14.0
500.0	19549.5	-5.8	-27.5	16.0
424.0	23725.3	-14.9	-35.0	16.0
400.0	25164.8	-18.8	-38.2	16.0
334.6	29457.5	-27.0	-44.5	17.0
300.0	32028.2	-33.5	-50.0	17.0
250.0	36159.2	-43.0		
200.0	41001.8	-53.5		
150.0	46934.4	-65.6		
122.0	51013.7	-71.4		
104.6	54001.2	-73.7		
100.0	54070.7	-72.5		
82.6	58611.7	-68.9		
79.0	61871.0	-70.0		
62.0	64286.4	-64.9		
50.0	66670.6	-60.1		
34.8	76220.7	-55.8		
30.0	79374.7	-51.7		
26.2	82300.2	-40.7		
20.0	88164.3	-49.5		

GLONUTIC COORDINATES  
33.30888 LAT 1EG  
106.40406 LONG DLG

UPPER AIR DATA  
2750230004  
SW 70

TABLE 11

STATION ALTITUDE 4355.50 FEET MSL  
LOCAL TIME 1405 HRS MDT  
OBSERVATION NO. 4

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4355.5	868.7	30.4	21.0	923.0	680.1	270.0	2.9	1.000259
4500.0	865.6	30.1	21.0	920.5	679.7	270.0	2.9	1.000258
5000.0	850.9	29.6	21.0	918.3	678.0	302.3	3.3	1.000252
5500.0	836.2	27.1	21.5	966.9	676.2	320.2	4.2	1.000248
6000.0	821.7	25.6	22.1	955.1	674.4	331.4	5.3	1.000244
6500.0	807.4	24.0	22.6	943.4	672.7	341.1	6.1	1.000239
7000.0	793.4	22.5	23.2	932.0	670.9	347.7	6.7	1.000235
7500.0	779.7	21.0	23.7	920.6	669.1	352.6	7.1	1.000231
8000.0	766.1	19.5	24.3	909.5	667.4	350.3	8.0	1.000227
8500.0	752.8	18.9	24.8	898.5	665.6	358.9	9.3	1.000223
9000.0	739.6	16.9	23.6	886.2	664.3	354.4	10.2	1.000218
9500.0	726.4	16.0	21.4	873.3	663.2	349.1	11.1	1.000212
10000.0	713.5	15.1	19.3	860.7	662.0	349.7	9.8	1.000207
10500.0	700.8	14.3	17.1	848.2	661.0	351.9	8.1	1.000202
11000.0	688.2	13.1	17.6	836.4	659.6	359.0	6.2	1.000199
11500.0	675.8	11.9	19.3	824.8	658.2	347.9	4.7	1.000196
12000.0	663.6	10.7	19.0	813.4	656.8	347.9	5.9	1.000193
12500.0	651.5	10.5	15.9	799.2	656.6	334.8	7.8	1.000188
13000.0	639.7	10.1	14.0	786.1	655.9	323.4	10.7	1.000183
13500.0	627.9	9.0	14.0	774.7	654.6	323.7	13.3	1.000180
14000.0	616.4	7.8	14.0	763.4	653.3	317.1	14.6	1.000177
14500.0	605.0	6.7	14.0	752.5	652.1	312.5	15.2	1.000174
15000.0	593.8	5.6	14.0	741.4	650.8	309.8	14.4	1.000171
15500.0	582.9	4.5	14.0	730.7	649.4	303.5	13.2	1.000169
16000.0	572.2	3.4	14.0	720.1	648.1	309.2	11.5	1.000166
16500.0	561.6	2.3	14.0	709.7	646.8	306.5	10.3	1.000163
17000.0	551.5	1.2	14.0	699.4	645.5	300.4	9.5	1.000161
17500.0	540.9	-.1	14.3	689.0	644.0	294.4	8.4	1.000158
18000.0	530.6	-1.5	14.7	680.0	642.3	287.1	6.9	1.000156
18500.0	520.5	-2.9	15.1	670.6	640.6	283.5	5.8	1.000153
19000.0	510.6	-4.3	15.5	661.3	639.0	280.5	4.8	1.000151
19500.0	500.9	-5.7	16.0	652.1	637.3	273.4	4.3	1.000149

STATION ALTITUDE 4395.50 FEET MSL  
 1 OCT. 69 1405 HRS MDT  
 ASCENSION NO. 4

UPPER AIR DATA  
 2750230004  
 5M 70

GEODETTIC COORDINATES  
 53.55888 LAT LEG  
 106.40406 LONG LEG

TABLE 11 (CONT)

GEODETTIC ALTITUDE FSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
20000.0	491.2	-6.8	16.0	642.1	636.0	303.9	4.6	1.000146
20500.0	481.6	-7.9	16.0	632.2	634.7	304.7	5.1	1.000144
21000.0	472.2	-9.0	16.0	622.4	633.5	293.0	6.1	1.000141
21500.0	462.4	-10.1	16.0	612.7	632.0	276.3	7.4	1.000139
22000.0	453.9	-11.1	16.0	603.5	630.7	259.4	9.9	1.000137
22500.0	445.0	-12.2	16.0	594.0	629.4	249.0	11.6	1.000134
23000.0	436.5	-13.3	16.0	584.8	628.1	240.7	13.0	1.000132
23500.0	427.8	-14.4	16.0	575.8	626.7	234.1	13.9	1.000130
24000.0	419.5	-15.6	16.0	567.1	625.2	228.2	14.6	1.000128
24500.0	410.9	-17.0	16.0	558.7	623.6	224.7	15.4	1.000126
25000.0	402.7	-18.4	16.0	550.4	621.9	222.2	16.1	1.000124
25500.0	394.5	-19.4	16.1	541.5	620.6	221.6	16.8	1.000122
26000.0	386.4	-20.4	16.2	532.4	619.4	221.3	17.4	1.000120
26500.0	378.5	-21.4	16.3	523.5	618.2	220.3	17.8	1.000118
27000.0	370.7	-22.3	16.4	514.7	617.1	235.4	18.4	1.000116
27500.0	363.1	-23.3	16.5	506.1	615.9	248.5	17.7	1.000114
28000.0	355.5	-24.2	16.7	497.6	614.7	262.4	17.9	1.000112
28500.0	348.0	-25.2	16.8	489.3	613.5	276.2	19.3	1.000110
29000.0	341.2	-26.1	16.9	481.1	612.3	287.7	21.6	1.000108
29500.0	334.2	-27.1	17.0	473.1	611.1	291.5	24.1	1.000106
30000.0	327.1	-28.4	17.0	465.5	609.5	293.6	26.5	1.000104
30500.0	320.2	-29.6	17.0	458.1	608.0	293.5	26.9	1.000103
31000.0	313.5	-30.9	17.0	450.7	606.4	293.0	27.2	1.000101
31500.0	306.8	-32.2	17.0	443.5	604.8	297.0	27.9	1.000099
32000.0	300.0	-33.4	17.0	436.5	603.2	300.8	28.7	1.000098
32500.0	293.2	-34.6	15.1**	429.0	601.7	302.9	29.7	1.000096
33000.0	287.4	-35.7	13.0**	421.7	600.5	304.5	30.7	1.000094
33500.0	281.1	-36.9	10.9**	414.5	598.6	303.0	31.3	1.000093
34000.0	275.0	-38.0	8.9**	407.4	597.4	302.1	31.7	1.000091
34500.0	269.0	-39.2	6.0**	400.5	595.9	302.0	31.3	1.000089
35000.0	263.1	-40.3	4.0**	393.7	594.4	303.4	30.8	1.000088
35500.0	257.4	-41.5	2.7**	387.0	593.0	303.9	30.0	1.000086

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 9595.50 FEET MSL  
 LOCATION 1405 HRS MDT  
 1 OCT 70  
 UPPER AIR DATA  
 2750230004  
 SP 70  
 GEODETIC COORDINATES  
 33.36886 LAT DEG  
 106.40406 LONG DEG

TABLE 11 (CONT)

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
5000.0	251.0	-42.6	74	380.5	591.5	304.4	29.5	1.000035
5050.0	242.1	-43.7		373.7	590.1	304.8	29.7	1.000023
5100.0	240.5	-44.8		366.9	588.7	305.5	29.9	1.000012
5150.0	233.0	-45.9		360.3	587.3	308.2	30.8	1.000000
5200.0	229.7	-47.0		353.8	585.9	310.7	31.8	1.000079
5250.0	224.4	-48.1		347.4	584.5	311.9	33.0	1.000077
5300.0	219.3	-49.2		341.1	583.1	313.0	34.3	1.000076
5350.0	214.5	-50.2		335.0	581.6	311.5	35.1	1.000075
5400.0	209.4	-51.3		328.9	580.2	310.0	35.9	1.000073
5450.0	204.7	-52.4		323.0	578.8	309.1	36.7	1.000072
5500.0	200.0	-53.5		317.2	577.4	308.2	37.5	1.000071
5550.0	195.2	-54.5		311.1	576.0	309.3	38.6	1.000069
5600.0	190.5	-55.5		305.0	574.7	310.5	39.7	1.000068
5650.0	185.0	-56.6		299.1	573.3	311.1	40.3	1.000067
5700.0	181.5	-57.6		293.3	572.0	311.7	41.0	1.000065
5750.0	177.2	-58.6		287.7	570.6	312.4	41.7	1.000064
5800.0	172.9	-59.6		282.1	569.3	313.2	42.4	1.000063
5850.0	168.8	-60.6		276.7	567.9	313.8	42.7	1.000062
5900.0	164.8	-61.7		271.4	566.6	314.5	42.8	1.000060
5950.0	160.8	-62.7		266.2	565.2	314.5	42.4	1.000059
6000.0	157.3	-63.7		261.0	563.8	314.3	41.7	1.000058
6050.0	153.2	-64.7		256.0	562.4	314.5	40.2	1.000057
6100.0	149.5	-65.7		251.0	561.1	315.4	38.0	1.000056
6150.0	145.8	-66.7		245.0	560.2	316.1	35.0	1.000055
6200.0	142.1	-67.7		240.3	559.2	316.0	34.1	1.000054
6250.0	138.5	-68.7		235.1	558.2	316.7	32.3	1.000052
6300.0	135.1	-69.7		230.0	557.3	315.1	31.1	1.000051
6350.0	131.7	-70.2		225.1	556.3	313.5	29.9	1.000050
6400.0	128.5	-70.6		220.2	555.3	311.5	27.7	1.000049
6450.0	125.2	-70.7		215.5	554.4	309.3	25.5	1.000048
6500.0	122.1	-71.6		210.8	553.4	307.7	24.5	1.000047
6550.0	119.5	-71.8		205.9	552.6	305.2	23.9	1.000046

\*\* AT LEVEL OF 5500.0 METERS, RELATIVE HUMIDITY WAS 0.70 IN THE INTERPOLATION.

STATION ALTITUDE 4395.50 FEET MSL  
 1 OCT. 69  
 ACQUISITION NO. 4

UPPER AIR DATA  
 2750230004  
 5W 70

GEODETIC COORDINATES  
 33.36488 LAT DEG  
 106.40406 LONG DEG

1405 HRS MDT

TABLE 11 (CONT)

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL.HUMID. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TR)	SPEED KNOTS	INDEX OF REFRACTION
5200.0	116.0	-72.2		201.0	552.3	305.1	23.7	1.000045
5300.0	113.0	-72.5		196.3	551.8	304.3	23.8	1.000044
5400.0	110.1	-72.9		191.6	551.3	303.8	23.7	1.000043
5500.0	107.3	-73.3		187.1	550.7	303.6	23.3	1.000042
5600.0	104.6	-73.7		182.7	550.2	303.8	22.8	1.000041
5700.0	101.9	-73.0		177.4	551.1	303.8	22.4	1.000040
5800.0	99.3	-72.4		172.4	552.0	303.8	22.0	1.000038
5900.0	96.9	-71.9		167.6	552.7	303.8	21.9	1.000037
6000.0	94.4	-71.4		163.0	553.3	303.8	21.9	1.000036
6100.0	92.0	-70.9		158.5	554.0	303.2	22.0	1.000035
6200.0	89.7	-70.5		154.1	554.7	307.2	22.1	1.000034
6300.0	87.4	-70.0		149.9	555.3	309.8	21.5	1.000033
6400.0	85.2	-69.5		145.8	556.0	313.7	20.0	1.000032
6500.0	83.1	-69.0		141.8	556.8	313.2	18.5	1.000032
6600.0	81.0	-69.0		138.2	556.6	321.9	16.1	1.000031
6700.0	79.0	-69.2		134.9	556.4	327.0	13.9	1.000030
6800.0	77.0	-69.4		131.5	556.1	330.9	11.8	1.000029
6900.0	75.0	-69.5		128.4	555.9	334.2	9.9	1.000029
7000.0	73.2	-69.7		125.3	555.7	336.5	8.3	1.000028
7100.0	71.3	-69.9		122.2	555.4	330.4	7.5	1.000027
7200.0	69.6	-69.7		119.1	555.6	322.9	6.8	1.000027
7300.0	67.8	-69.7		115.6	557.1	315.5	6.9	1.000026
7400.0	66.1	-69.6		112.1	558.5	308.9	7.3	1.000025
7500.0	64.5	-69.6		108.8	560.0	304.8	7.5	1.000024
7600.0	62.9	-69.5		105.5	561.4	304.8	7.2	1.000023
7700.0	61.4	-69.7		102.5	562.5	309.8	6.9	1.000023
7800.0	59.9	-69.1		99.8	563.3	307.4	6.7	1.000022
7900.0	58.4	-69.6		97.1	564.0	310.8	6.6	1.000022
8000.0	57.0	-69.8		94.5	564.7	314.8	6.6	1.000021
8100.0	55.6	-69.5		92.0	565.5	320.9	6.7	1.000020
8200.0	54.3	-69.9		89.5	566.2	326.7	6.9	1.000020
8300.0	53.0	-69.4		87.1	566.9	330.8	7.6	1.000019



STATION ALTITUDE 2500 FT MSL  
 TIME 1405 HRS MDT  
 WIND DIR 100  
 WIND SPOED 10

UPPER AIR DATA  
 2750230004  
 50 70

GEODETIC COORDINATES  
 35.36848 LAT DEG  
 106.40406 LONG DEG

TABLE 11 (CONT)

GEODETIC ALTITUDE	PRESSURE	TEMPERATURE	HUMIDITY	DENSITY	SPEED OF	WIND DATA	INDEX
MSL FEET	ALTITUDE	DEGREES	PERCENT	GM/CUBIC	WINDS	DIRECTION	OF
				FEET	KNOTS	DEGREES (T)	REFRACTION
5000.0	51.7	-60.0		84.0	507.7	333.2	1.000019
5500.0	50.0	-60.0		82.5	508.4	335.1	1.000018
6000.0	49.2	-59.0		80.4	508.9	348.9	1.000018
6500.0	48.0	-59.0		78.4	509.3	4.5	1.000017
7000.0	46.4	-59.5		76.4	509.6	20.3	1.000017
7500.0	45.0	-59.1		74.5	570.0	37.0	1.000017
8000.0	44.7	-58.3		72.7	570.4	50.5	1.000016
8500.0	43.7	-58.5		70.3	570.8	58.3	1.000016
9000.0	42.0	-58.0		69.1	571.2	64.4	1.000015
9500.0	41.0	-57.0		67.3	571.5	72.4	1.000015
10000.0	40.6	-57.0		65.7	571.9	80.0	1.000015
10500.0	39.7	-57.5		64.0	572.3	89.7	1.000014
11000.0	38.7	-57.1		62.4	572.7	103.7	1.000014
11500.0	37.0	-56.1		60.9	573.1	107.9	1.000014
12000.0	36.0	-56.5		59.3	573.4	111.2	1.000013
12500.0	35.0	-56.0		57.0	573.8	114.9	1.000013
13000.0	34.2	-55.0		56.4	574.2	118.8	1.000013
13500.0	34.5	-55.0		55.0	574.8	123.5	1.000012
14000.0	33.5	-54.0		53.5	575.7	120.8	1.000012
14500.0	32.0	-54.1		52.1	576.5	120.8	1.000012
15000.0	32.1	-53.5		50.8	577.4	120.8	1.000011
15500.0	31.5	-52.0		49.4	578.2	120.8	1.000011
16000.0	30.5	-52.0		48.1	579.1	120.8	1.000011
16500.0	29.9	-51.0		46.9	579.9	120.8	1.000010
17000.0	29.1	-51.1		45.7	580.0	120.8	1.000010
17500.0	28.5	-50.0		44.0	581.2	120.8	1.000010
18000.0	27.4	-50.0		43.4	581.9	120.8	1.000010
18500.0	27.0	-49.0		42.4	582.0	120.8	1.000009
19000.0	26.0	-49.0		41.5	583.3	120.8	1.000009
19500.0	25.0	-49.7		40.5	583.0	30.8	1.000009
20000.0	25.4	-49.8		39.4	583.5	30.8	1.000009
20500.0	24.0	-49.0		38.5	583.4	30.8	1.000009

STATION ALTITUDE 4335.50 FEET MSL  
1 OCT. 80  
ASCENSION NO. 4 1405 HRS MDT

UPPER AIR DATA  
2750230004  
SW 70

GEODLTIC COORDINATES  
33.36888 LAT DEG  
106.40406 LON DEG

TABLE 11 (CONT)

GEODLTIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
04000.0	24.2	-40.9		37.0	563.4	306.8	2.5	1.000008
04500.0	23.7	-40.0		36.8	583.3	306.8	3.1	1.000008
05000.0	23.1	-40.1		36.0	583.2	306.8	2.3	1.000008
05500.0	22.6	-40.1		35.2	583.1	306.6	1.4	1.000008
06000.0	22.1	-40.2		34.4	583.0	306.8	.5	1.000008
06500.0	21.6	-40.3		33.6	582.9			1.000007
07000.0	21.1	-40.3		32.8	582.8			1.000007
07500.0	20.6	-40.4		32.1	582.7			1.000007
08000.0	20.2	-40.5		31.4	582.6			1.000007

GEODETIC COORDINATES  
33.36888 LAT DEG  
106.40406 LONG DEG

MANDATORY LEVELS  
2750230004  
SW 70

STATION ALTITUDE 4395.50 FEET MSL  
1 OCT. 40  
ASCESSION NO. 4 1405 HRS MDT

TABLE 12

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT DEGREES	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS
350.0	5028.	28.5	4.1	21.	303.6	5.3
300.0	6776.	23.3	.9	23.	345.3	6.6
750.0	8602.	17.7	-2.0	25.	359.2	9.6
700.0	10522.	14.2	-10.5	17.	352.0	8.0
650.0	12555.	10.5	-14.0	15.	333.8	8.1
600.0	14725.	6.3	-19.2	14.	311.3	14.8
550.0	17041.	1.1	-23.4	14.	299.7	9.5
500.0	19523.	-5.8	-27.5	16.	294.3	4.3
450.0	22292.	-11.6	-32.3	16.	254.4	11.0
400.0	25124.	-18.8	-38.2	16.	221.7	16.3
350.0	28349.	-25.0	-42.9	17.	273.3	18.9
300.0	31966.	-33.5	-50.0	17.	300.8	28.7
250.0	36082.	-43.0			304.5	29.5
200.0	40904.	-53.5			308.2	37.5
175.0	43677.	-59.1			312.0	42.1
150.0	46810.	-65.6			315.2	38.4
125.0	50401.	-70.7			309.2	25.4
100.0	54704.	-72.5			303.8	22.1
80.0	59050.	-69.1			323.9	15.1
70.0	61663.	-70.0			325.4	7.0
60.0	64719.	-64.2			306.9	6.7
50.0	68417.	-60.1			330.3	9.4
40.0	73014.	-57.5			84.8	6.9
30.0	79041.	-51.7			120.8	1.2
25.0	82953.	-48.8			306.8	1.6
20.0	87756.	-49.5				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.